

**WHAT IS CLAIMED IS:**

1. A system, comprising:  
a processor; and  
5 a memory comprising program instructions, wherein the program instructions are executable by the processor to:  
collect storage demand data for a storage system; and  
determine a storage requirement for the storage system to meet a given  
storage availability risk level under one or more conditions  
10 indicated by the storage demand data.
2. The system as recited in claim 1, wherein the program instructions are further executable by the processor to determine a storage availability risk level for the storage system given a storage requirement for the storage system under the one or more  
15 conditions indicated by the storage demand data.
3. The system as recited in claim 1, wherein the program instructions are further executable by the processor to determine a storage demand capacity given a storage availability risk level and a storage requirement for the storage system.  
20
4. The system as recited in claim 1, wherein the program instructions are further executable by the processor to modify a subset of storage system factors according to user input to determine an effect on one or more other storage system factors.
- 25 5. The system as recited in claim 4, wherein the storage system factors include a storage demand capacity, a storage availability risk level, and the storage requirement.
6. The system as recited in claim 1, wherein the one or more conditions indicated by the storage demand data include:  
30 demand, wherein the demand indicates an amount of storage consumed by one or

more applications in a given time period; and  
demand variability, wherein the demand variability indicates the amount of  
variability in storage consumption by the one or more applications in the  
given time period.

5

7. The system as recited in claim 1, wherein the program instructions are further  
executable by the processor to determine a storage requirement for the storage system to  
meet a given storage availability risk level under one or more conditions indicated by the  
storage demand data given a periodic review time.

10

8. The system as recited in claim 1, wherein the program instructions are further  
executable by the processor to determine a storage requirement for the storage system to  
meet a given storage availability risk level under one or more conditions indicated by the  
storage demand data given a lead time to acquire new storage.

15

9. The system as recited in claim 1, wherein the storage requirement indicates a  
target storage inventory-on-hand.

10. The system as recited in claim 9, wherein the program instructions are further  
executable by the processor to determine a target storage average inventory-on-hand from  
the target storage inventory-on-hand for a given periodic review time.

11. The system as recited in claim 1, wherein the storage system is a pooled storage  
system for a plurality of applications, wherein the determined storage requirement for the  
pooled storage system to meet the given storage availability risk level under the one or  
more conditions indicated by the storage demand data is lower than a combined storage  
requirement for each of the plurality of applications using non-pooled storage.

12. The system as recited in claim 1, wherein the storage demand data is collected for  
a plurality of applications, and wherein, to determine a storage requirement for the

30

storage system to meet a given storage availability risk level under one or more conditions indicated by the storage demand data, the program instructions are further executable by the processor to:

5                   determine a non-pooled storage requirement for the plurality of applications in  
                    accordance with a non-pooled storage system to meet the given storage  
                    availability risk level under one or more conditions indicated by the  
                    storage demand data for the plurality of applications;  
                    determine a pooled storage requirement for the plurality of applications in  
                    accordance with a pooled storage system to meet the given storage  
10                   availability risk level under one or more conditions indicated by the  
                    storage demand data for the plurality of applications; and  
                    compare the non-pooled storage requirement and the pooled storage requirement  
                    to determine if the pooled storage system or the non-pooled storage system  
                    is to be used for the plurality of applications.

15

13.    The system as recited in claim 1, wherein the storage system is a Storage Area Network (SAN) system.

14.    The system as recited in claim 1, wherein the storage system is a non-pooled  
20    storage system for a single application.

15.    A system, comprising:  
          means for collecting storage demand data for a storage system;  
          means for determining one or more conditions for the storage system from the  
25           storage demand data;  
          means for determining a storage requirement for the storage system to meet a  
          given storage availability risk level under the one or more conditions  
          indicated by the storage demand data.

30    16.    A method, comprising:

collecting storage demand data for a storage system; and  
determining a storage requirement for the storage system to meet a given storage  
availability risk level under one or more conditions indicated by the  
storage demand data.

5

17. The method as recited in claim 16, further comprising determining a storage  
availability risk level for the storage system given a storage requirement for the storage  
system under the one or more conditions indicated by the storage demand data.

10 18. The method as recited in claim 16, further comprising determining a storage  
demand capacity given a storage availability risk level and a storage requirement for the  
storage system.

15 19. The method as recited in claim 16, further comprising modifying a subset of  
storage system factors in response to user input to determine an effect on one or more  
other storage system factors, wherein the storage system factors include a storage demand  
capacity, a storage availability risk level, and the storage requirement.

20 20. The method as recited in claim 16, wherein the one or more conditions indicated  
by the storage demand data include:

demand, wherein the demand indicates an amount of storage consumed by one or  
more applications in a given time period; and

demand variability, wherein the demand variability indicates the amount of  
variability in storage consumption by the one or more applications in the  
25 given time period.

21. The method as recited in claim 16, further comprising determining a storage  
requirement for the storage system to meet a given storage availability risk level under  
one or more conditions indicated by the storage demand data given a periodic review time  
30 and a lead time to acquire new storage.

22. The method as recited in claim 16, wherein the storage requirement indicates a target storage inventory-on-hand.

5 23. The method as recited in claim 16, wherein the storage demand data is collected for a plurality of applications, and wherein, in said determining a storage requirement for the storage system to meet a given storage availability risk level under one or more conditions indicated by the storage demand data, the method further comprises:

10 determining a non-pooled storage requirement for the plurality of applications in accordance with a non-pooled storage system to meet the given storage availability risk level under one or more conditions indicated by the storage demand data for the plurality of applications;

15 determining a pooled storage requirement for the plurality of applications in accordance with a pooled storage system to meet the given storage availability risk level under one or more conditions indicated by the storage demand data for the plurality of applications; and

20 comparing the non-pooled storage requirement and the pooled storage requirement to determine if the pooled storage system or the non-pooled storage system is to be used for the plurality of applications.

24. The method as recited in claim 16, wherein the storage system is a Storage Area Network (SAN) system.

25 25. A computer-accessible medium comprising program instructions, wherein the program instructions are configured to implement:

30 collecting storage demand data for a storage system; and  
determining a storage requirement for the storage system to meet a given storage availability risk level under one or more conditions indicated by the storage demand data.

26. The computer-accessible medium as recited in claim 25, wherein the program instructions are further configured to implement determining a storage availability risk level for the storage system given a storage requirement for the storage system under the one or more conditions indicated by the storage demand data.

5

27. The computer-accessible medium as recited in claim 25, wherein the program instructions are further configured to implement determining a storage demand capacity given a storage availability risk level and a storage requirement for the storage system.

10 28. The computer-accessible medium as recited in claim 25, wherein the program instructions are further configured to implement modifying a subset of storage system factors in response to user input to determine an effect on one or more other storage system factors, wherein the storage system factors include a storage demand capacity, a storage availability risk level, and the storage requirement.

15

29. The computer-accessible medium as recited in claim 25, wherein the one or more conditions indicated by the storage demand data include:

demand, wherein the demand indicates an amount of storage consumed by one or more applications in a given time period; and

20 demand variability, wherein the demand variability indicates the amount of variability in storage consumption by the one or more applications in the given time period.

25 30. The computer-accessible medium as recited in claim 25, wherein the program instructions are further configured to implement determining a storage requirement for the storage system to meet a given storage availability risk level under one or more conditions indicated by the storage demand data given a periodic review time and a lead time to acquire new storage.

30 31. The computer-accessible medium as recited in claim 25, wherein the storage

requirement indicates a target storage inventory-on-hand.

32. The computer-accessible medium as recited in claim 25, wherein the storage demand data is collected for a plurality of applications, and wherein, in said determining  
5 a storage requirement for the storage system to meet a given storage availability risk level under one or more conditions indicated by the storage demand data, the program instructions are further configured to implement:

determining a non-pooled storage requirement for the plurality of applications in  
accordance with a non-pooled storage system to meet the given storage  
10 availability risk level under one or more conditions indicated by the storage demand data for the plurality of applications;

determining a pooled storage requirement for the plurality of applications in  
accordance with a pooled storage system to meet the given storage  
availability risk level under one or more conditions indicated by the  
15 storage demand data for the plurality of applications; and

comparing the non-pooled storage requirement and the pooled storage  
requirement to determine if the pooled storage system or the non-pooled  
storage system is to be used for the plurality of applications.

20 33. The computer-accessible medium as recited in claim 25, wherein the storage system is a Storage Area Network (SAN) system.